

The chief features of a building which form a style, are, first, the means of support; secondly, the means of spanning space between the supports; and, thirdly, the formation of the roof. It is the decoration of these structural features which gives the characteristics of style, and they all follow so naturally one from the other, that the invention of one will command the rest.

It would appear, at first sight, that the means of varying these structural features had been exhausted, and that we have nothing left but to use either one or the other of the systems which have already run their course.

If we reject the use of the column and horizontal beam of the Greeks and Egyptians, the round arch of the Romans, the pointed arch and vault of the Middle Ages, and the domes of the Mohammedans, it will be asked—What is left? We shall perhaps be told that all the means of covering space have already been exhausted, and that it were vain to look for other forms. But could not this have been said in all time? Could the Egyptian have ever imagined that any other mode of spanning space would ever be found than his huge blocks of stone? Could the Mediæval architect have ever dreamed that his airy vaults could be surpassed, and that gulfs could be crossed by hollow tubes of iron? Let us not despair; the world has not seen, most assuredly, the last of the architectural systems. If we are now passing through an age of copying, and architecture with us exhibits a want of vitality, the world has passed through similar periods before. From the present chaos there will arise, undoubtedly (it may not be in our time), an architecture which shall be worthy of the high advance which man has made in every other direction towards the possession of the tree of knowledge.

To return to our subject, how is any new style of art or new style of ornament to be formed, or even attempted to be formed? In the first place, we have little hope that we are destined to see more than the commencement of a change; the architectural profession is at the present time too much under the influence of past education on the one hand, and too much influenced by an ill-informed public on the other; but the rising generation in both classes are born under happier auspices, and it is to them we must look for hope in the future. It is for their use that we have gathered together this collection of the works of the past; not that they should be slavishly copied, but that artists should, by an attentive examination of the principles which pervade all the works of the past, and which have excited universal admiration, be led to the creation of new forms equally beautiful. We believe that if a student in the arts, earnest in his search after knowledge, will only lay aside all temptation to indolence, will examine for himself the works of the past, compare them with the works of nature, bend his mind to a thorough appreciation of the principles which reign in each, he cannot fail to be himself a creator, and to individualise new forms, instead of reproducing the forms of the past. We think it impossible that a student fully impressed with the law of the universal fitness of things in nature, with the wonderful variety of form, yet all arranged around some few fixed laws, the proportionate distribution of areas, the tangential curvatures of lines, and the radiation from a parent stem, whatever type he may borrow from Nature, if he will dismiss from his mind the desire to imitate it, but will only seek to follow still the path which it so plainly shows him, we doubt not that new forms of beauty will more readily arise under his hand, than can ever follow from a continuation in the prevailing fashion of resting only on the works of the past for present inspiration. It will require but a few minds to give the first impulse: the way once pointed out, others will follow, readily improving, refining upon each other's efforts, till another culminating point of Art shall be again reached to subside into decline and disorder. For the present, however, we are far enough removed from either stage.

We have been desirous to aid this movement to the extent of our power; and in the ten plates of leaves and flowers which accompany this chapter, we have gathered together many of those natural types which we thought best calculated to awaken a recognition of the natural laws which prevail in

the distribution of form. But, indeed, these laws will be found to be so universal, that they are as well seen in one leaf as in a thousand. The single example of the chestnut leaf, Plate XCI., contains the whole of the laws which are to be found in Nature: no art can rival the perfect grace of its form, the perfect proportional distribution of the areas, the radiation from the parent stem, the tangential curvatures of the lines, or the even distribution of the surface decoration. We may gather this from a single leaf. But if we further study the law of their growth, we may see in an assemblage of leaves of the vine or the ivy, that the same law which prevails in the formation of the single leaf prevails also in the assemblage of leaves. As in the chestnut leaf, Plate XCI., the area of each lobe diminishes in equal proportion as it approaches the stem, so in any combination of leaves each leaf is everywhere in harmony with the group: as in one leaf the areas are so perfectly distributed that the repose of the eye is maintained, it is equally so in the group: we never find a disproportionate leaf interfering to destroy the repose of the group. This universal law of equilibrium is everywhere apparent in Plates XCVIII., XCIX., C. The same laws prevail in the distribution of lines on the surface of flowers; not a line upon the surfaces but tends more surely to develop the form,—not a line which could be removed, and leave the form more perfect; and this why? Because the beauty arises naturally from the law of the growth of each plant. The life-blood,—the sap, as it leaves the stem, takes the readiest way of reaching the confines of the surface, however varied that surface may be; the greater the distance it has to travel, or the weight it has to support, the thicker will be its substance. (See *Convolvulus*, XCVIII., XCIX.)

On Plate XCVIII. we have shown several varieties of flowers, in plan and elevation, from which it will be seen that the basis of all form is geometry, the impulse which forms the surface, starting from the centre with equal force, necessarily stops at equal distances; the result is symmetry and regularity.

Who then will dare say that there is nothing left for us but to copy the five or seven-lobed flowers of the thirteenth century; the Honeysuckle of the Greeks or the Acanthus of the Romans,—that this alone can produce art,—is Nature so tied? See how various the forms, and how unvarying the principles. We feel persuaded that there is yet a future open to us; we have but to arouse from our slumbers. The Creator has not made all things beautiful, that we should thus set a limit to our admiration; on the contrary, as all His works are offered for our enjoyment, so are they offered for our study. They are there to awaken a natural instinct implanted in us,—a desire to emulate in the works of our hands, the order, the symmetry, the grace, the fitness, which the Creator has sown broadcast over the earth.